UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/637,442	08/11/2000	Shannon Lee Korson	13DV13511	7955

6111 7590 09/27/2002

GENERAL ELECTRIC COMPANY
ANDREW C HESS
GE AIRCRAFT ENGINES
ONE NEUMANN WAY M/D H17
CINCINNATI, OH 452156301

EXAMINER	
SCHRANTZ, STEPHEN D	
ART UNIT	PAPER NUMBER
2177	

DATE MAILED: 09/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/637,442	KORSON ET AL.	
	Examiner	Art Unit	
	Steve Schrantz	2177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 January 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4 & 5* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawings are objected to because they fail to show necessary textual labels of features or symbols 10, 20, and 24 in Fig. 1 as described in the specification. For example, placing a label, "Flight Data Handling System", with element 10 of Fig. 1, would give the viewer necessary detail to fully understand this element at a glance. A ***descriptive*** textual label for ***each numbered element*** in these figures would be needed to fully and better understand these figures without substantial analysis of the detailed specification. Any structural detail that is of sufficient importance to be described should be shown in the drawing. Optionally, applicant may wish to include a table next to the present figure to fulfill this requirement. See 37 CFR 1.83. 37 CFR 1.84(n)(o) is recited below:

> "(n) Symbols. Graphical drawing symbols may be used for conventional elements when appropriate. The elements for which such symbols and labeled representations are used must be adequately identified in the specification. Known devices should be illustrated by symbols which have a universally recognized conventional meaning and are generally accepted in the art. Other symbols which are not universally recognized may be used, subject to approval by the Office, if they are not likely to be confused with existing conventional symbols, and if they are readily identifiable.
>
> (o) Legends. Suitable descriptive legends may be used, or may be required by the Examiner, where necessary for understanding of the drawing, subject to approval by the Office. They should contain as few words as possible."

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "engine configuration data", "aircraft configuration data", "engine input data", "engine raw output data", "engine smoothed output data", "aircraft input data", "aircraft raw output data", "aircraft smoothed output data", and "compressed data" of claims 3 and 6 must be shown or the feature(s) canceled from the claim(s). The mapping of tables and columns in program database to tables and columns in

destination database of claim 7 must also be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-2, 4-5, 7-16, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al. (U.S. Patent 5,870,765) and further in view of Aratow et al. (U.S. Patent 6,199,008).

Bauer teaches independent claim 1 by the following:

"extracting data from said program database" at col. 11 lines 29-37;

"exporting said extracted data to said destination database" at col. 11 lines 49-55;

"after a successful export, updating an external time file with the date and time of said successful export" at col. 12 lines 4-7.

Bauer teaches an invention that is capable of extracting modified information from one database and exporting it to another at col. 11 lines 23-57. He does not teach a specific type of information for which his invention can function. Aratow does teach a system in which an

engine condition monitoring program is stored in a database at col. 5 lines 27-36. It would be obvious to one ordinarily skilled in the art at the time of the invention to combine Aratow's aircraft database tables with Bauer's database invention. By using Bauer's invention, the database will contain the most recent information without the transmission and time costs needed to send the entire contents of the database.

Bauer teaches dependent claim 2 by the following:

"extracting only data that is new or changed since the previous successful export" at col. 2 lines 7-12.

Bauer teaches dependent claims 4 and 7 by the following:

"mapping tables and columns in said program database to tables and columns in said destination database" at col. 3 lines 12-24.

Bauer teaches independent claim 5 as explained by claim 1 above and by the following:

"reading an external time file to determine the last date and time that data was successfully exported to said destination database; searching said program database for data that is new or changed since said last successful export" at col. 13 lines 1-8;

"retrieving data found in searching said program database" at col. 11 lines 29-37;

"exporting said retrieved data to said destination database" at col. 11 lines 49-55;

"after a successful export, updating said external time file with the date and time of said successful export" at col. 12 lines 4-7.

Bauer in view of Aratow teaches dependent claim 8 by the following:

"said program database includes a flight data table" at Aratow col. 5 lines 44-52;

"... a number of engine data tables" at Aratow col. 5 lines 34-36;

"... aircraft data tables" at Aratow col. 5 lines 27-28;

"... step of searching said program database comprises searching said flight data table for flight data that is new or modified since said last successful export" at Bauer col. 11 lines 29-42.

Bauer teaches dependent claim 9 by the following:

"retrieving data from said engine data tables and said flight data tables for each flight data record found in said flight data table" at col. 1 lines 35-41.

Bauer teaches dependent claim 10 by the following:

"providing each of said engine data tables and said aircraft engine tables with an indication that data retrieval is completed after said flight data is retrieved from each table" at col. 11 line 63 to col. 12 line 7.

Bauer in view of Aratow teaches dependent claim 11 by the following:

"said program database includes a process indicator table" at Bauer col. 23 lines 18-35 and Bauer col. 24 lines 43-50;

"... a number of engine data tables" at Aratow col. 5 lines 34-36;

"... aircraft data tables" at Aratow col. 5 lines 27-28;

"... step of searching said program database comprises searching said process indicator table for reprocessed flight data that is changed since said last successful export" at Bauer col. 11 lines 29-42.

Bauer teaches dependent claim 12 by the following:

"retrieving data from said engine data tables and said aircraft data tables for each reprocessed flight data record found in said process indicator table" at col. 11 lines 23-37.

Bauer teaches dependent claim 13 by the following:

"providing each of said engine data tables and said aircraft engine tables with an indication that data retrieval is completed after said reprocessed flight data is retrieved from each table" at col. 11 line 63 to col. 12 line 7.

Bauer and Aratow teach dependent claim 14 by the following:

"... said program database includes an initialization data table" at Aratow Fig. 3E, Fig. 3F, and col. 5 lines 44-63;

"... said step of searching said program database comprises searching said initialization data table for initialization data that is changed since said last successful export" at Bauer col. 11 lines 29-42.

Bauer teaches dependent claim 15 by the following:

"retrieving initialization data found in said initialization data table" at col. 1 lines 35-41.

Bauer teaches dependent claim 16 by the following:

"providing said initialization data table with an indication that data retrieval is completed after said initialization data is retrieved from said initialization table" at col. 11 line 63 to col. 12 line 7.

Bauer and Aratow teach independent claim 20 as explained in claim 1 and by the following:

"an engine condition monitoring program having a program database" at Aratow col. 5 lines 27-37;

"a destination database" at Bauer Fig. 1;

"a time file" at Bauer col. 9 lines 21-24;

"means for extracting data from said program database" at Bauer col. 11 lines 32-37

"means for exporting said extracted data to said destination database" at Bauer col. 11 lines 49-53;

"means for updating said external time file with the date and time of a successful export" at Bauer col. 12 lines 4-7.

Bauer teaches dependent claim 21 by the following:

"configuration file containing information for mapping tables and columns in said program database to tables and columns in said destination database" at col. 3 lines 12-24.

6. Claims 3, 6, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer in view of Aratow as applied to claims above, and further in view of Klauber et al. (U.S. Patent 5,869,752).

Aratow teaches dependent claims 3 and 6 by the following:

"aircraft configuration data" at Aratow col. 5 lines 27-37;

"aircraft input data" at Aratow col. 5 lines 27-37;

"aircraft raw output data" at Aratow col. 5 lines 27-37 and col. 5 lines 44-63;

"aircraft smoothed output data" at Aratow col. 5 lines 27-37 and col. 5 lines 44-63;

"alert data" at Aratow col. 4 lines 34-39 and col. 4 lines 54-61;

"initialization data" at Aratow Fig. 3E, Fig. 3f, and col. 5 lines 44-63;

Aratow stores data concerning a wide variety of characteristics with flight and engine data. He does not teach some of the specific fields concerning the engine. Klauber does teach some of the specific data types concerning the engine. Klauber teaches the specific engine topics by the following:

"engine configuration data" at col. 1 lines 26-49;

"engine input data" at col. 3 lines 8-20 and col. 18 lines 56-66;

"engine raw output data" at col. 1 lines 26-49;

"engine smoothed output data" at col. 15 lines 43-48;

"compressed data" at col. 15 lines 43-48.

It would be obvious to one ordinarily skilled in the art at the time of the invention to store the engine data in Aratow's database. By storing these fields in Aratow's invention, a pilot, crewmen, and others who may be concerned would be better informed of the engine conditions. The pilot, crewmen, and others could then make more informed decisions.

As per claims 17-19, Bauer in view of Aratow teaches a system in which an engine condition monitoring program is stored in a database. They do not teach the storage of "compression data" in the tables. Klauber teaches the compression data at col. 15 lines 43-48.

Bauer in view of Aratow and Klauber teach dependent claim 17 by the explanation found above in claims 3 and 6 and by the following:

"... said program database includes a compression data table" at Klauber col. 15 lines 43-48 and Aratow Fig. 3A-F and Fig. 4;

"... said step of searching said program database comprises searching said compression data table for compression data that is changed since said last successful export" at Bauer col. 11 lines 29-42.

It would be obvious to one ordinarily skilled in the art at the time of the invention to store the compression data in the tables of the engine condition monitoring program. By storing these fields in Aratow's invention, a pilot, crewmen, and others who may be concerned would be

better informed of the engine conditions. The pilot, crewmen, and others could then make more informed decisions, thus reducing the risks found in flight.

Bauer teaches dependent claim 18 by the following:

"retrieving compression data found in said compression data table" at col. 1 lines 35-41.

Bauer teaches dependent claim 19 by the following:

"providing said compression data table with an indication that data retrieval is completed after said compression data is retrieved from said compression table" at col. 11 line 63 to col. 12 line 7.

Conclusion

7. The prior art made of record in PTO-892 and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Schrantz whose telephone number is (703) 305-7690. The examiner can normally be reached on Mon-Fri. 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (703) 305-9790. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

SDS
September 23, 2002

JOHN BREENE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100